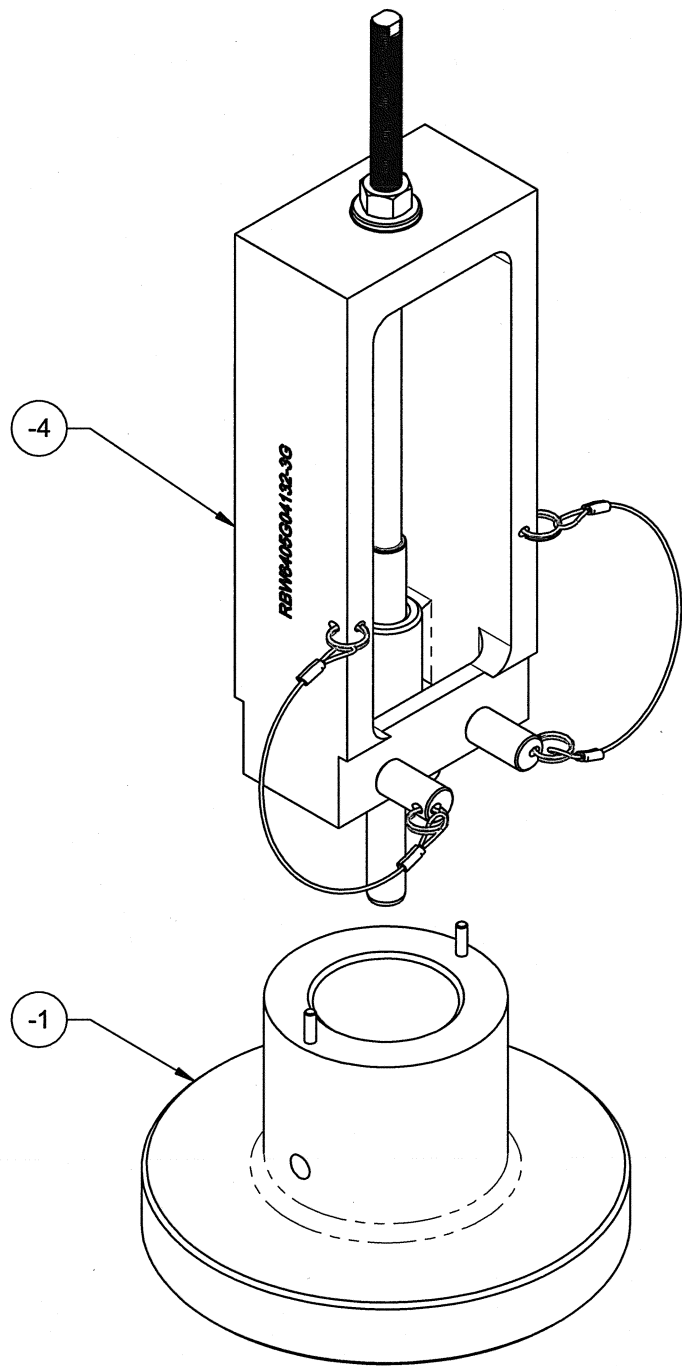


ITEM #	QTY	PART #	PART TITLE
-1	1	RBW6405G04132-3G-1	HUB ASSY
-4	1	RBW6405G04132-3G-4	FRAME ASSY

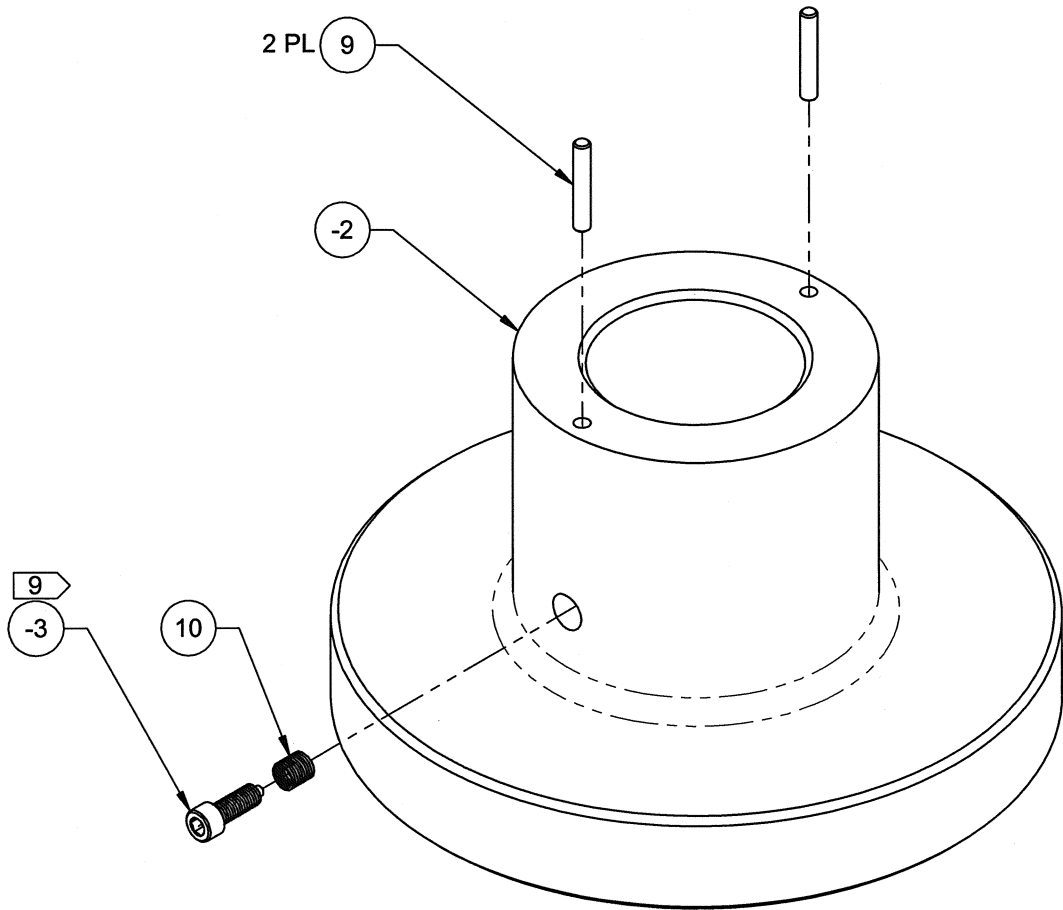


RBW6405G04132-3G T/R DUPLEX BEARING INSTALLATION

NOTES:  
1) MATERIAL: N/A  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"  
5) UNITS: INCHES UNLESS OTHERWISE NOTED  
6) IDENTIFICATION: N/A  
7) THE TOOL ASSY MUST BE PACKAGED WITH A DESICCANT BAG INTO A TIGHT FITTING SEALED PLASTIC BAG

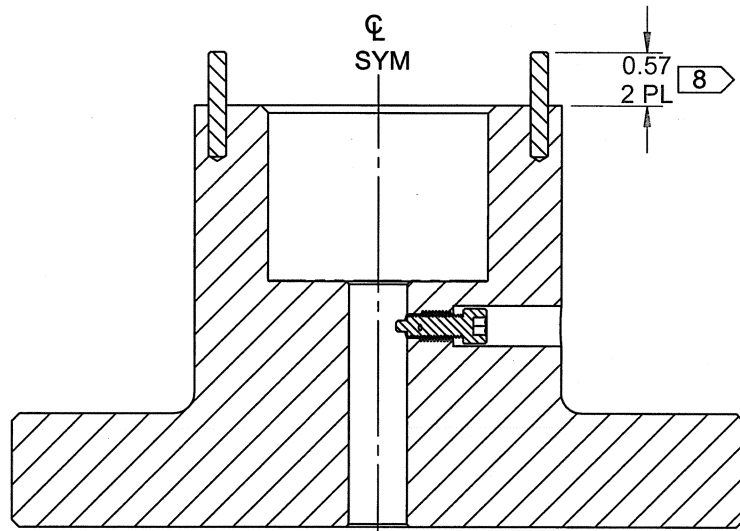
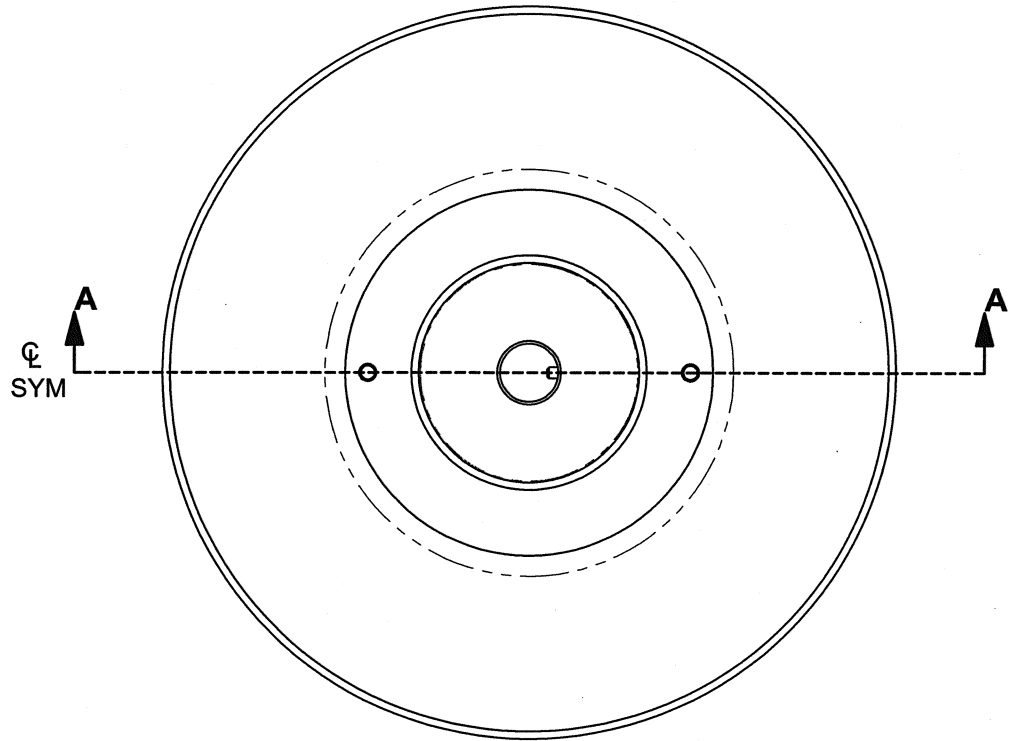
SEE PDFs FOR OLDER REVs TEMPLATE UPDATED PER DART HBY STANDARDS ITEM -1 CHANGED FOR ITEM -2 ITEM -1 ASSY ADDED ITEM -4 ASSY ADDED ITEM -13 CHANGED FOR ITEM -5 ITEM -5 CHANGED FOR ITEM -6 ITEM -9 CHANGED FOR ITEM -8 ITEM -11 REMOVED AND REPLACED BY McMaster#91131A071 ITEM -15 DOWEL PIN McMaster#98381A511 CHANGED FOR ITEM 9 McMaster#97395A474 ITEM 10 McMaster#91732A232 ADDED ITEM -3 MATERIAL WAS McMaster#92562A596 IS McMaster#92185A561, DIMENSION .121 CHANGED FOR 0.121 +0/-0.005, DIMENSION .722 CHANGED FOR .72, R0.008 MAX ADDED ITEM -2 DIMENSION .1874/.1869 CHANGED FOR .1875/.1867, DIMENSION 2.362 CHANGED FOR 2.362 +0.005/-0, R0.015 MAX ADDED, .03 X 45° CMF 2 PL ADDED, DIMENSION .08 X 45° 2PL CHANGED FOR 3 PL.DIMENSION 3.454 B.C CHANGED FOR 3.454 +/- 0.001, DIMENSION 1/4-28 UNF 2A CHANGED FOR 1/4"-28 HELICOIL, MATERIAL WAS 6061 CLEAR ANODIZE IS 6061/7075 RED ANODIZE ITEM -5 DIMENSION.514 CHANGED FOR .516, DIMENSION 1.4170/1.4164 CHANGED FOR 1.1250/1.1242, R0.008 MAX ADDED, DIMENSION 0.02 X 45° CMF ADDED, ENGRAVING "MADE IN USA" AND S/N REMOVED, DIMENSION .16 CHANGED FOR 0.157, DIMENSION .30 CHANGED FOR 0.295, DIMENSION 30° CHANGED FOR 30.4°, MATERIAL WAS 6061 CLEAR ANODIZE IS 6061/7075 RED ANODIZE ITEM -6 MATERIAL WAS 4140 Q&T/4142 Q&T CAD PLATE YELLOW IS 4140(28-32Rc) BLACK OXIDE, DIMENSION .669 +/- .002 CHANGED FOR 0.660 +/- 0.002, DIMENSION .502 CHANGED FOR 0.499, ENGRAVING REMOVED, DIMENSION .65 UNDERCUT CHANGED FOR MIN UNDERCUT, THREAD RELIEF ADDED, DIMENSION .228 CHANGED FOR 0.23, DIMENSION .193 CHANGED FOR 0.505 FROM THE TANGENT POINT OF THE SHAFT, 0.02 X 45° CMF 2 PL ADDED, CENTER DRILL ACCEPTABLE NOTE ADDED ITEM -7 MATERIAL 4140 Q&T/4142 Q&T CAD PLATE YELLOW CHANGED FOR 4140 (28-32 RC) ZINC PLATE TYPE 2 CLASS 2, DIMENSION .674 +/- .002 CHANGED FOR 0.670, ALL CHAMFER REPLACED BY 0.08 X 45° CMF 4 PL ITEM -8 MATERIAL 4140 Q&T/4142 Q&T CAD PLATE YELLOW CHANGED FOR 4140 (28-32 RC) ZINC PLATE TYPE 2 CLASS 2, DIMENSION .21 CHANGED FOR 0.210, DIMENSION .16 CHANGED FOR 0.157, DIMENSION 45° CHANGED FOR 45.0°, R0.03 ADDED, CENTER DRILL NOTE ADDED		19-580	VM
REV.	DESCRIPTION	ECN #	BY
DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	VM	TOOL PART #	REV. E
MFG. APPR.	RQ	RBW6405G04132-3G	SHEET 1 OF 9
APPROVED	VP	TITLE	SCALE
DATE	3/1/2019	T/R DUPLEX BEARING INSTALLATION	NTS
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ITEM #	QTY	PART #	PART TITLE
-2	1	RBW6405G04132-3G-2	HUB
-3	1	RBW6405G04132-3G-3	SOCKET HEAD CAP SCREW MODIFIED
9	2	McMaster#97395A474 OR EQUIV	SS316 DOWEL PIN 3/16" DIA. x 1-1/8" LG.
10	1	McMaster#91732A232 OR EQUIV.	SS HELICAL INSERT 1/4"-28 X 3/8" LG.





**RBW6405G04132-3G-1 HUB ASSY**

- NOTES:
- 1) MATERIAL: N/A
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) IDENTIFICATION: N/A
  - 7) ASSEMBLE AS SHOWN
  - 8) APPLY RETAINING COMPOUND LOCTITE 620 OR EQUIVALENT ON MATING SURFACES  
THEN PRESS FIT ITEMS 9 WITH ITEM -2, AND REMOVE EXCESS
  - 9) APPLY NICKEL ANTI-SEIZE LOCTITE LB 771 ON THREADS OF ITEM -3 THEN ASSEMBLE WITH ITEMS 10 AND -2, AND REMOVE EXCESS



**SECTION A-A**

DESIGN	VM	<b>DART AEROSPACE LTD</b>	
DRAWN	VM	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VM	TOOL PART #	REV. E
MFG. APPR.	RQ	<b>RBW6405G04132-3G</b>	SHEET 2 OF 9
APPROVED			
DATE 3/1/2019		TITLE	SCALE
		T/R DUPLEX BEARING INSTALLATION	NTS 
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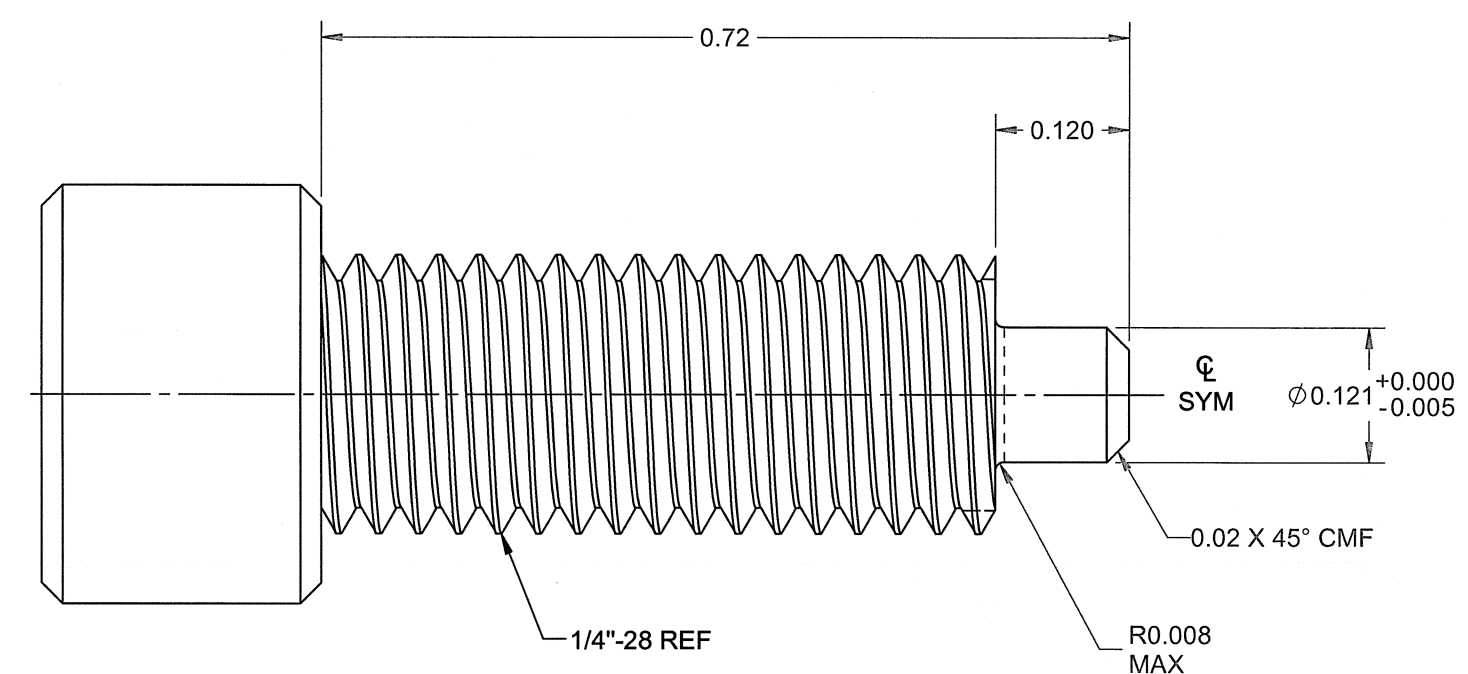
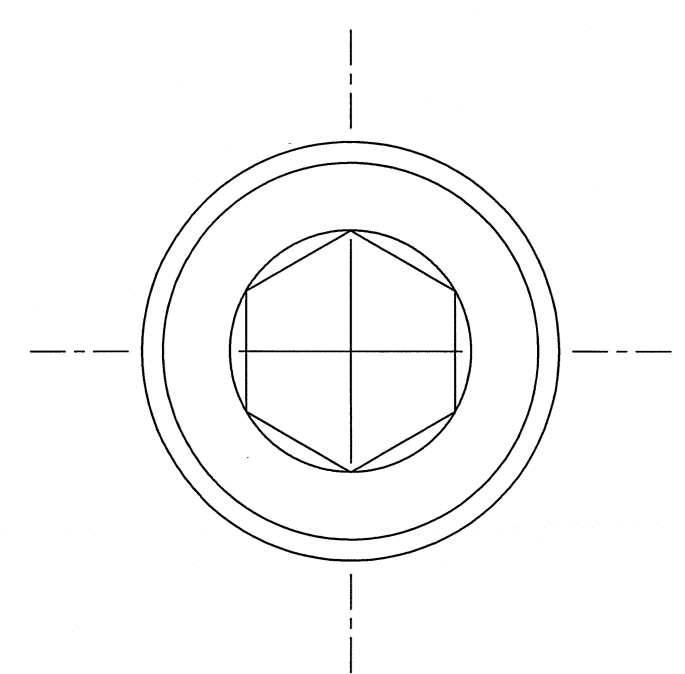
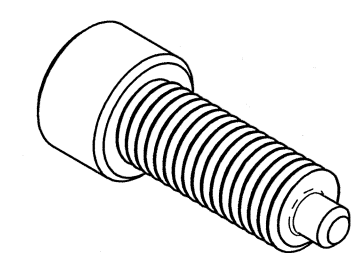
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**RBW6405G04132-3G-3 SOCKET HEAD CAP SCREW MODIFIED**

NOTES:  
1) MATERIAL: McMaster#92185A561 OR EQUIV (SS316 SOCKET HEAD SCREW 1/4"-28 x 3/4" LG.  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
                  X.XX = +/- 0.01" / +/- 0.5°  
                  X.XXX = +/- 0.005" / +/- 0.1°  
                  X.XXXX = +/- 0.0005" / +/- 0.05°  
                  PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"  
5) UNITS: INCHES UNLESS OTHERWISE NOTED  
6) REMOVE ALL SHARP EDGES AND BURRS  
7) IDENTIFICATION: N/A

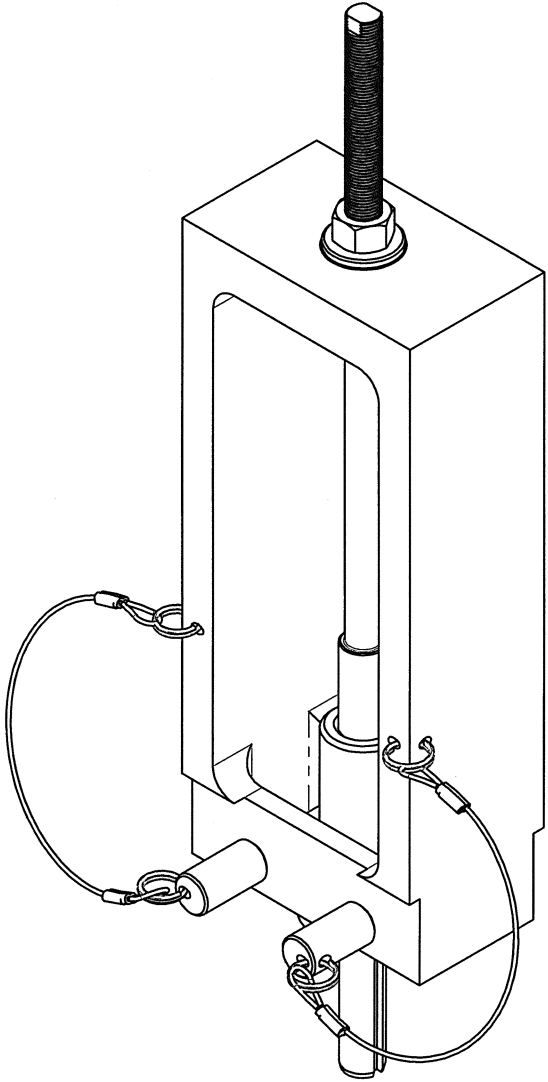
DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	VM	TOOL PART #	REV. E
MFG. APPR.	RQ	<b>RBW6405G04132-3G</b>	SHEET 4 OF 9
APPROVED	VH	TITLE	SCALE
DATE 3/1/2019		<b>T/R DUPLEX BEARING INSTALLATION</b>	NTS
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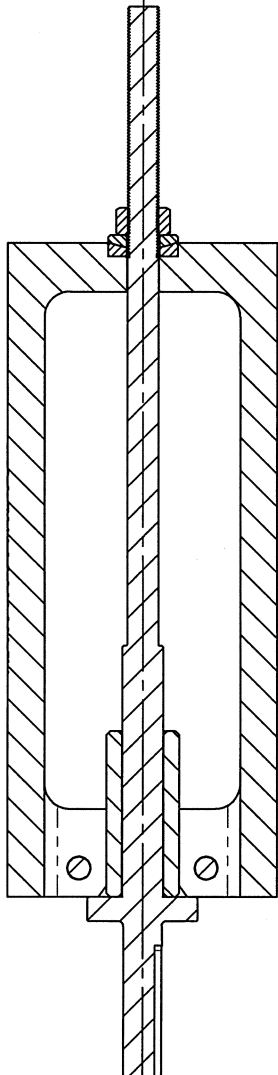
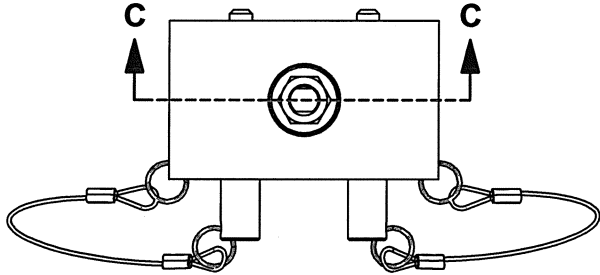
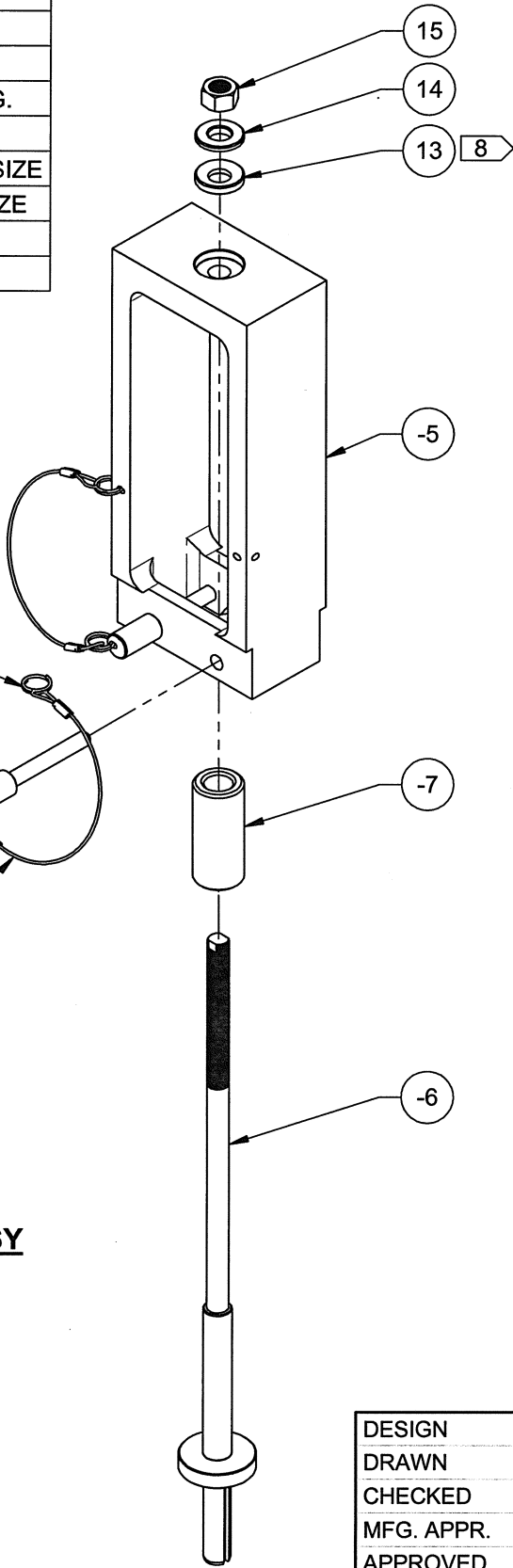
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ITEM #	QTY	PART #	PART TITLE
-5	1	RBW6405G04132-3G-5	FRAME
-6	1	RBW6405G04132-3G-6	ROD
-7	1	RBW6405G04132-3G-7	SLIDER
-8	2	RBW6405G04132-3G-8	PIN
11	4	McMaster#3896T31 OR EQUIV.	ALUMINUM WIRE ROPE COMPRESSION SLEEVE 1/16" DIA. X 3/8" LG.
12	4	McMaster#90905A652 OR EQUIV	SS316 SPLIT RING 11/16" OD x 1/8" THK
13	1	McMaster#91131A072 OR EQUIV	STEEL BLACK OXIDE LEVELING FEMALE WASHER FOR 1/2" SCREW SIZE
14	1	McMaster#91131A071 OR EQUIV	STEEL BLACK OXIDE LEVELING MALE WASHER FOR 1/2" SCREW SIZE
15	1	McMaster#94191A550 OR EQUIV	STEEL HEX NUT 1/2"-20 GRADE 8
16	AR	CL-2-C	STEEL NYLON COATED LANYARD





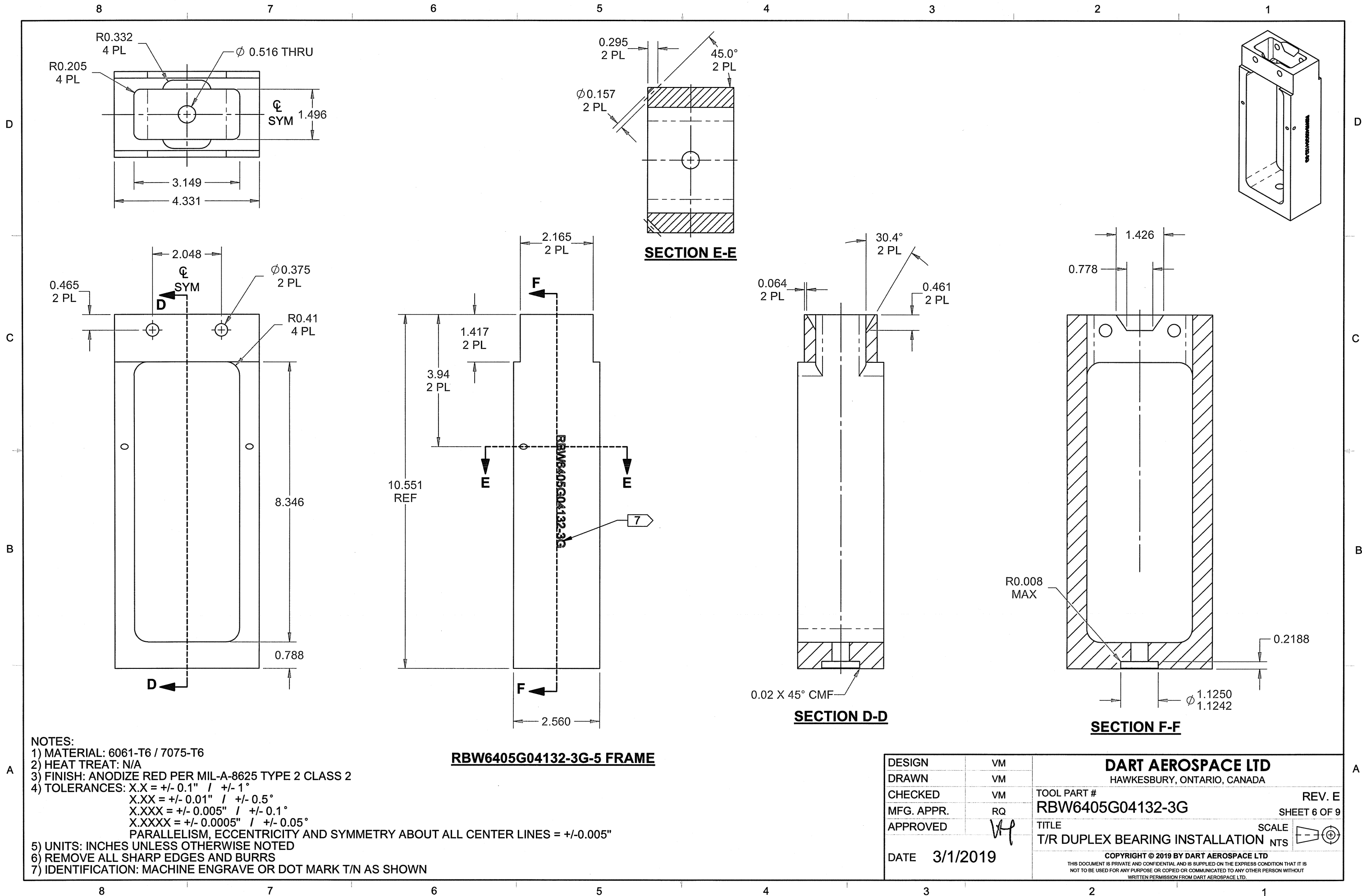
4 PL 12  
2 PL -8  
4 PL 11  
2 PL 16  
9



NOTES:  
1) MATERIAL: N/A  
2) HEAT TREAT: N/A  
3) FINISH: N/A  
4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"  
5) UNITS: INCHES UNLESS OTHERWISE NOTED  
6) IDENTIFICATION: N/A  
7) ASSEMBLE AS SHOWN  
8) APPLY RETAINING COMPOUND LOCTITE 620 OR EQUIVALENT ON MATING SURFACES  
THEN PRESS FIT ITEM 13 WITH ITEM -5, AND REMOVE EXCESS  
9) ASSEMBLED LANYARD LENGTH MUST BE 8" +/- 1"

RBW6405G04132-3G-4 FRAME ASSY

DESIGN	VM	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	VM	TOOL PART # RBW6405G04132-3G	REV. E
MFG. APPR.	RQ		SHEET 5 OF 9
APPROVED		TITLE	SCALE
		T/R DUPLEX BEARING INSTALLATION	NTS 
DATE	3/11/2019	COPYRIGHT © 2019 BY DART AEROSPACE LTD	
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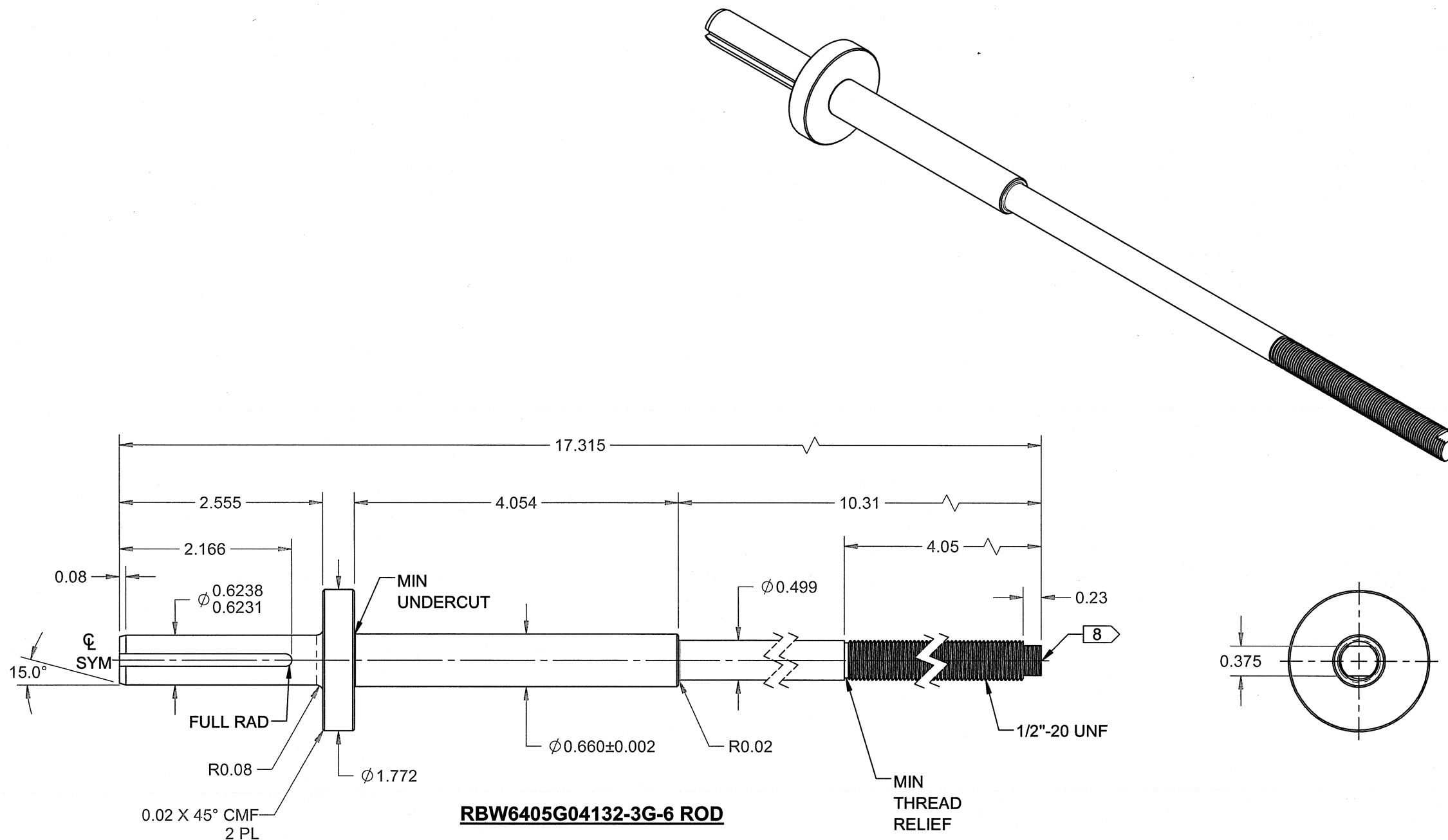
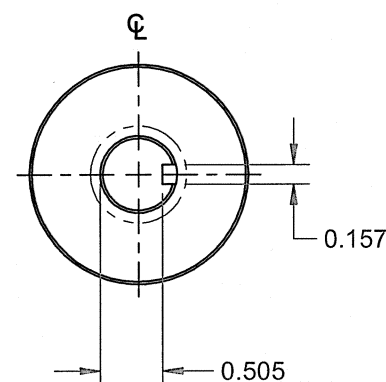
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**RBW6405G04132-3G-6 ROD**

- NOTES:
- 1) MATERIAL: 4140 (28-32 RC)
  - 2) HEAT TREAT: N/A
  - 3) FINISH: BLACK OXIDE PER MIL-C-13924 CLASS 1 THEN APPLY A THIN LAYER OF OIL / CPC PER MIL-PRF-16173 GRADE 3 CLASS 1 OR MIL-C-81309 TYPE III OR MIL-C-23411A OR MIL-PRF-81309 AND WIPE OFF EXCESS
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) REMOVE ALL SHARP EDGES AND BURRS
  - 7) IDENTIFICATION: N/A
  - 8) CENTER DRILL IS ACCEPTABLE

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	VM	TOOL PART #	REV. E
MFG. APPR.	RQ	<b>RBW6405G04132-3G</b>	SHEET 7 OF 9
APPROVED	VM	TITLE	SCALE
DATE 3/1/2019		<b>T/R DUPLEX BEARING INSTALLATION</b>	NTS
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8 7 6 5 4 3 2 1

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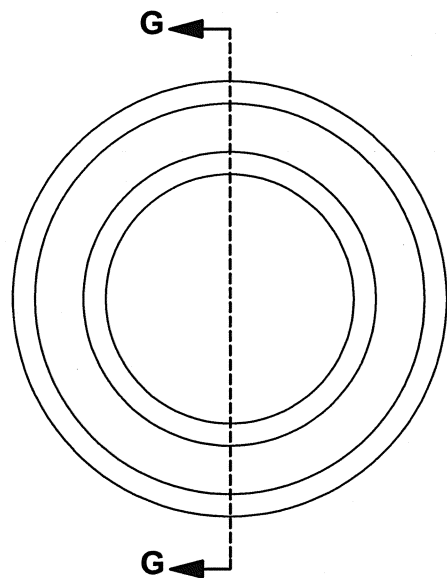
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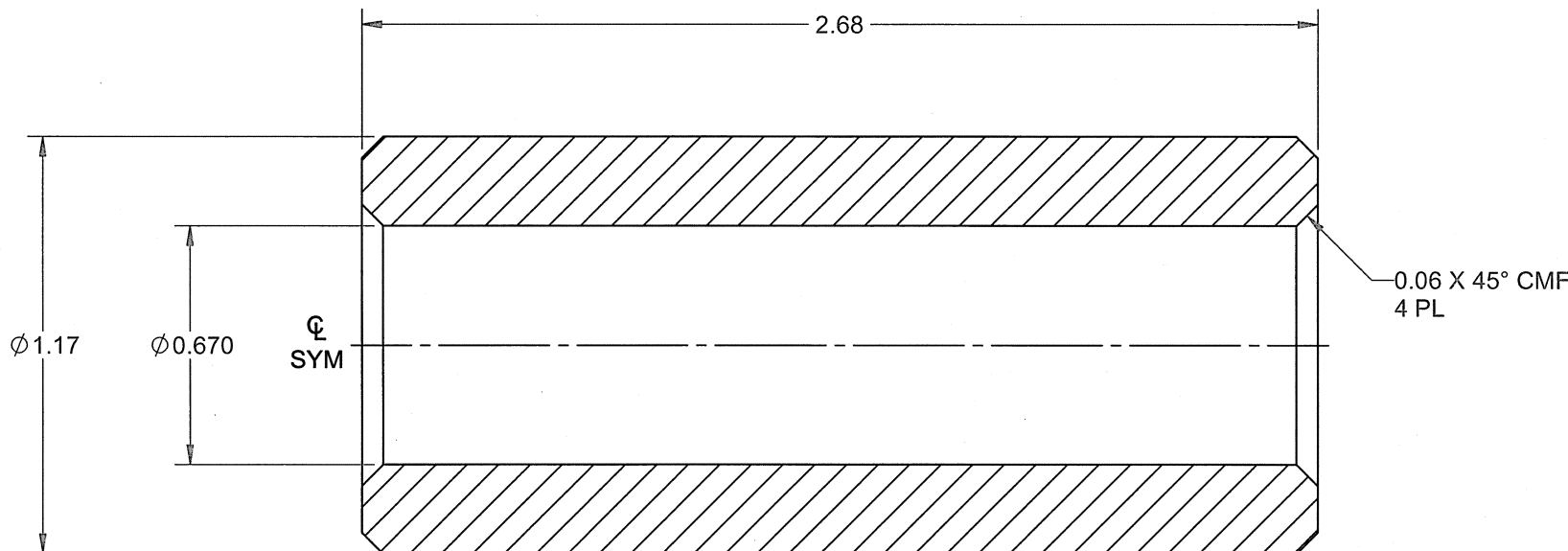
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**RBW6405G04132-3G-7 SLIDER**



**SECTION G-G**

- NOTES:
- 1) MATERIAL: 4140 (28-32 RC)
  - 2) HEAT TREAT: N/A
  - 3) FINISH: ZINC PLATE (YELLOW OR BLACK) PER ASTM B633 TYPE 2 CLASS 2
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) REMOVE ALL SHARP EDGES AND BURRS
  - 7) IDENTIFICATION: N/A

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	VM	TOOL PART #	REV. E
MFG. APPR.	RQ	<b>RBW6405G04132-3G</b>	SHEET 8 OF 9
APPROVED	<i>VM</i>	TITLE	SCALE
DATE	3/1/2019	T/R DUPLEX BEARING INSTALLATION	NTS
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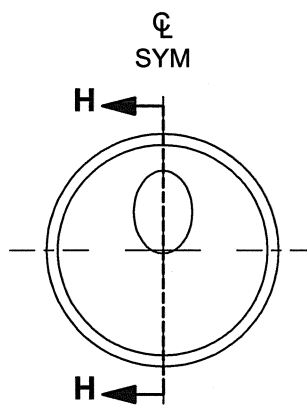
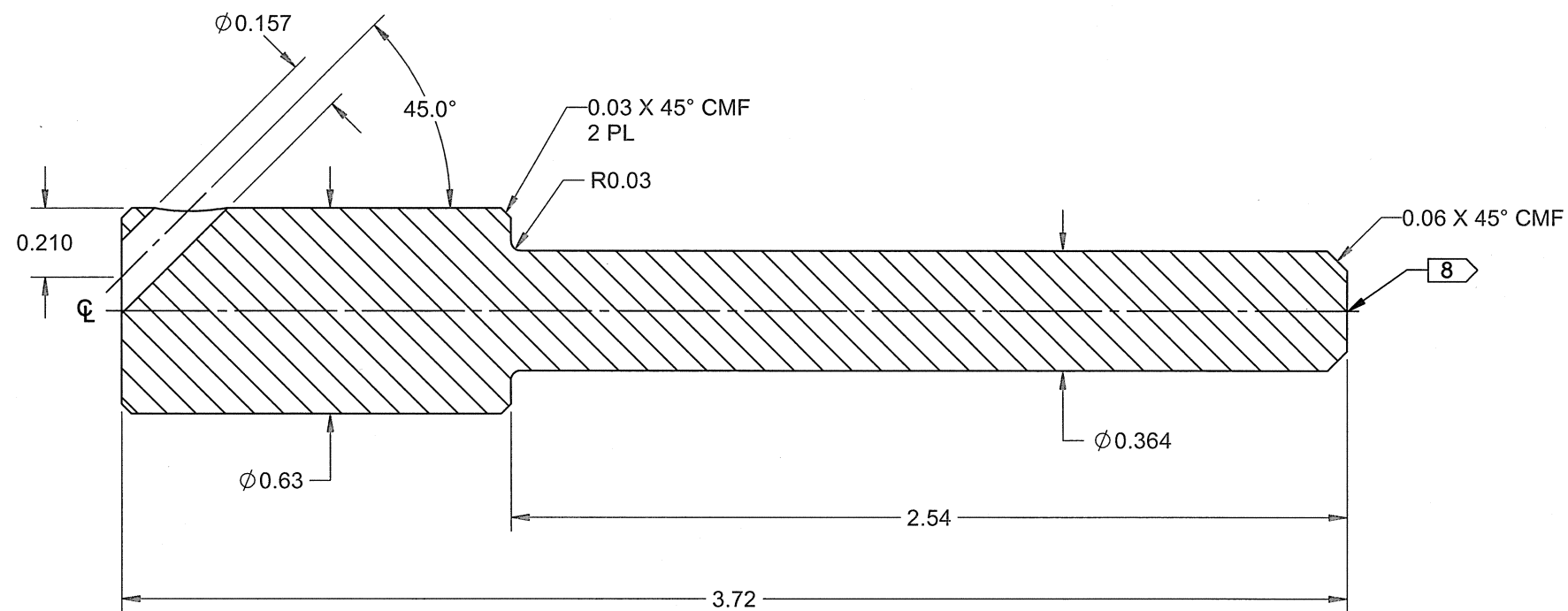
1

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**RBW6405G04132-3G-8 PIN****SECTION H-H****NOTES:**

- 1) MATERIAL: 4140 (28-32 RC)
- 2) HEAT TREAT: N/A
- 3) FINISH: ZINC PLATE (YELLOW OR BLACK) PER ASTM B633 TYPE 2 CLASS 2
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) REMOVE ALL SHARP EDGES AND BURRS
- 7) IDENTIFICATION: N/A
- 8) CENTER DRILL IS ACCEPTABLE

DESIGN	VM	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	VM		
CHECKED	VM	TOOL PART #	REV. E
MFG. APPR.	RQ	<b>RBW6405G04132-3G</b>	SHEET 9 OF 9
APPROVED	VP	TITLE	SCALE
DATE	3/1/2019	<b>T/R DUPLEX BEARING INSTALLATION</b>	NTS
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